

Add the following new claim 12.

12. A process for the measurement of fruit particles in a matrix comprising:

placing in a sample tray fruit particles in a matrix;

illuminating said fruit particles and matrix so that an image may be obtained in which the fruit particles are distinguishable from the background;

capturing a computer-readable image of at least a portion of said illuminated fruit particles and matrix; and

using a computer and an image analyzing software program to analyze said image and obtain information concerning said fruit particles.

REMARKS

In accordance with the Office Action, the specification has been amended to correct certain typographical errors. Applicants appreciate the careful review of this application and the suggestion to make these corrections.

Each of the independent claims of the application is now limited to measurement of fruit particles in a matrix. Independent claims 1 and 10 were amended. Independent claim 11 was cancelled and new claim 12 was substituted. Support for this amendment is found throughout the application as filed (emphasis added):

"The production of food products such as fruit fillings and toppings for use in, for example, yogurt and baked goods involves the cooking of fruit pieces with a variety of ingredients to produce a product with fruit pieces in a matrix of sugar, starch and/or other materials. Page 1.

Computer imaging is believed to have many advantages for use in the measurement of fruit particles in a matrix. Page 2.

Fruit pieces or a food product containing fruit pieces, for example, a filling with fruit pieces in a matrix of sugar and/or starch, is spread on a sample tray and placed above the translucent screen of a light box. Page 3.

Ambient light reflected off of the fruit particles or the fruit product matrix could interfere with the capture of the image. Page 6.

A sample consisting of fruit particles or fruit particles in a matrix is spread evenly inside the sample tray 26 with a spatula or, if the sample is not very viscous, by gently shaking the tray with a circular motion. Page 8.

It has been found that it is preferable not to use the lights in the optional incident light source 26 for fruit particles in a reflective matrix. Page 8.

It is respectfully submitted that the claim amendment is well-supported in the application as filed.

The unamended claims were rejected as obvious under 35 U.S.C. § 103. Claims 1, 3, 6 and 7 were rejected as being unpatentable over U.S. Patent No. 5,533,628 (Tao) in view of U.S. Patent No. 3,575,287 (Graveley). Claims 2, 8 and 9 were rejected as being unpatentable over the Tao '628 patent in view of the Graveley '287 patent and further in view of U.S. Patent No. 5,212,637 (Saxena). Claims 4 and 5 were rejected as unpatentable over the Tao '628 patent in view

of the Graveley '287 patent and further in view of U.S. Patent No. 5,301,090 (Hed). Claim 10 was rejected based on arguments analogous to those presented for claims 1, 3, 4, 6, and 7. Claim 11 was rejected based on arguments analogous to those presented for claim 1.

None of the art relied on or referred to in the Office Action refers or relates to the measurement of fruit particles in a matrix or any similar or analogous products. As shown above, the specification teaches that the matrix is composed of sugar, starch and/or other materials and could be reflective or otherwise interfere with the capture of the image. None of the cited prior art relates to analyzing images for such similarly complex or difficult to analyze products.

Tao '628 discloses methods and apparatus for sorting discrete objects (such as fruit) on a conveyor belt by color. The objects are not in a matrix. This is a completely different application of automatic imaging technology with much less complex and much less difficult problems.

The other cited art is completely non-analogous and no basis for combining the art as in the Office Action has been shown or exists. Graveley '278 relates to a packaging container for meat. Hed '090 relates to a luminaire. Saxena '637 relates to an optical assembly which includes a camera for analyzing information defining characteristics of a breast from a mammogram. It is improper to combine teachings from such unrelated sources using the claimed invention as the only motivation or basis for doing so. An inventor's own

invention may not be used as the basis for picking and choosing unrelated disclosures from the prior art using hindsight.

Respectfully submitted,

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Terrence W. McMillin

REGISTERED ATTORNEY FOR APPLICANT

February 10, 1999

DATE